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AN EVALUATION

DEFENSE SYSTEMS MANAGEMENT SCHOOL,
FORT BELVOIR, VIRGINIA

MAY 1976

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DEFENSE SYSTEMS MANAGEMENT SCHOOL



PROGRAM MANAGEMENT COURSE INDIVIDUAL STUDY PROGRAM

AIR FORCE PLANT COGNIZANCE PROGRAM:
AN EVALUATION

STUDY PROJECT REPORT
PMC 76-1

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STUDY TITLE: AIR FORCE PLANT COGNIZANCE PROGRAM: AN EVALUATION

STUDY PROJECT GOALS:

To understand USAF plant cognizance criteria and recommend changes to the criteria so that service plant cognizance ties in closer with DODD 5000.1, Acquisition of Major Defense Systems.

STUDY REPORT ABSTRACT:

The purpose of the study project was to review the history of the Air Force Plant Cognizance Program, evaluate and critique the present criteria for assigning plant cognizance, and recommend changes to the present criteria. The main conclusion of the study project was that the present criteria for assigning plant cognizance is time consuming, vague and subject to interpretation. The principal recommendation of the study report was to streamline the plant assignment process by tying it to the Defense Systems Acquisition Review Council (DSARC) process.

KEY WORDS

FACILITIES OPERATION INDUSTRIAL PLANTS PROJECT 60 ~~***~~**
DCAS

CONTRACT ADMINISTRATION
KEY WORDS: Plant Cognizance

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AIR FORCE PLANT COGNIZANCE PROGRAM:
AN EVALUATION

Study Project Report
Individual Study Program

Defense Systems Management School
Program Management Course
Class 76-1

by
Juri Randmaa
Major USAF

May 1976

Study Project Advisor
Dr. Joseph L. Hood

This study project report represents the views, conclusions, and recommendations of the author and does not necessarily reflect the official opinion of the Defense Systems Management School or the Department of Defense.

EXECUTIVE SUMMARY

Air Force Contract Management Division (AFCMD) of Air Force Systems Command (AFSC) was established in 1965. It is currently responsible for the administration and management of DOD Contracts through Air Force Plant Representative Offices at twenty-one contractor facilities throughout the country. Since establishment, AFCMD has transferred plant cognizance of seven facilities, and has picked up cognizance of six facilities.

The criteria that allows transfer of plant cognizance is called out in DODI 4105.59, Department of Defense Plant Cognizance Program. The Assistant Secretary of Defense for Installation and Logistics (ASD(I&L)) is responsible for assigning plants and for effective operation of the Program. Requests for assignment of major system plants to a service component must be accompanied by the eleven part Plant Cognizance Questionnaire, that is contained in Enclosure I of DODI 4105.59. Once ASD(I&L) determines that a plant should be transferred from one agency to another, negotiations (for personnel and spaces) are set up between agencies.

The present criteria for assignment of plant cognizance can be separated into three main areas or phases. The first phase is the interpretation of the criteria for service plant cognizance. The current criteria is very broad, and thus subject to different interpretations by AFCMD, AFSC, HQ USAF and ASD(I&L). The second phase is the preparation and submission

of the Plant Cognizance Questionnaire. Of the eleven questions in the questionnaire, only two are clear and straightforward. The others are vague, subject to interpretation, in some cases irrelevant, and always lengthy to answer (37 pages single spaced for the questionnaire that requested transfer of the Westinghouse, Baltimore plant from the Navy to the Air Force). The last phase to assigning plant cognizance is the negotiation process that follows the ASD(I&L) decision to transfer the plant. To date, this has turned into a fight for bodies and spaces since the losing service wants to retain as many authorizations as possible, and the gaining service wants to receive as many authorizations as possible.

Two changes are necessary to the present criteria to correct the problems discussed above. First, since the services highlight their most important programs to the SECDEF through the DSARC process, the criteria for service plant cognizance should be changed so that only DSARC programs have the same service contract administration services organization in the contractors plant. Transfer should be automatic, starting at DSARC II. Second, a manpower model must be developed for manpower transfer during plant transfer.

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SECTION I

INTRODUCTION

Purpose of Study Report

I have been in Air Force Contract Management Division (AFCMD) for over six years (four years at an Air Force Plant Representative Office (AFPRO) and two and a half years at HQ AFCMD). Last August I was involved in consolidating the Air Force request for assuming plant cognizance of Westinghouse, Baltimore from the Navy. The process at the time seemed very complex and time consuming. This study report allows me to take a more intense look at the overall DOD Plant Cognizance Program, evaluate and critique the present criteria, and suggest changes to the program that may be beneficial.

Organization of the Report

The report is broken down into five sections. Section II, contains a brief background and history of the USAF Plant Cognizance Program. Since I am in AFCMD, which is a division of Air Force Systems Command (AFSC), I have intentionally left out any references to the plants assigned to the Air Force Logistics Command's Contract Maintenance Center. In Section III the present criteria for plant cognizance is discussed. In Section IV, I evaluate and critique the criteria presented in Section III. Finally, in Section V, I recommend changes to the present criteria that I feel would alleviate the problems brought out in Section IV.

SECTION II

HISTORY OF USAF PLANT COGNIZANCE PROGRAM

Introduction

The Air Force Contract Management Division (AFCMD) of Air Force Systems Command (AFSC) is located at Kirtland Air Force Base, New Mexico. AFCMD is one of five major divisions of AFSC and is responsible for the administration and management of DOD contracts through Air Force Plant Representative Offices (AFPROs) at twenty-one contractor plants throughout the country. The other four divisions of AFSC are called buying divisions and are responsible for procuring military equipment for the USAF. If an item is procured from a contractor with an in-house AFPRO then, in accordance with Section 20 Part 5 of the Armed Services Procurement Regulations (ASPR), Contract Administration Services (CAS) as described in ASPR 1-406 will be performed by the AFPRO.

DOD Project 60

AFCMD was established in 1965 as an indirect result of Project 60, a Secretary of Defense (SECDEF) ordered Department of Defense (DOD) reorganization of defense contract management activities (5:1).¹

¹ This notation will be used throughout the report for major references. The first number is the source in the bibliography. If the source is a page-numbered document, the second number is the page number.

A chronology of major contract management events as they affected aircraft procurement from 1917 until the activation of AFCMD Headquarters on 4 January 1965 is shown in Appendix A (4:vi-x).

Under Project 60, all contractor plants working on DOD programs were assigned for contract management purposes either to Defense Supply Agency (DSA) or to one of the three military departments (5:1).

Project 60 was designed to increase standardization of contract management procedures throughout the Defense Department, reduce duplication of effort, decrease operating costs, and simplify government controls over industry (2:1).

Project 60, Step 1

The reorganization was to proceed in three steps. The implementation of Step 1 was directed by the SECDEF on 11 October 1963 (5:ii). This step provided for more centralized control of service-operated contract management activities by the Office of the Secretary of Defense (OSD), and for what came to be called a "revitalized national plant cognizance program." This revitalization referred to that portion of the change which placed all defense contracts within each of these plants under the purview of the service having the major interest in plant (1:12). Prior to this time, the Air Force administered only Air Force contracts at a contractor facility, while the Army and Navy administered their respective contracts at the same facility (14). Under Step 1 the Air Force ultimately was assigned DOD contract management responsibility in 25 major plant complexes (under 22 AFPRO's) working on prime Air Force systems. The Army received about ten plants, the Navy 19, and the DSA some 52 major plants (2:2).

Project 60, Step 2

Step 2 of Project 60 called for the central management under one DOD agency of all contract administration performed throughout the United States on a regional basis. These regional offices (Contract Management Districts and Offices in the case of the Air Force) were distinguished from the in-plant offices in that they managed the smaller contracts; nonetheless, these smaller contracts because of their greater number amounted in total value to about fifty percent of the total Department of Defense contract expenditure and consumed more than sixty percent of the DOD contract administration effort. Secretary of Defense McNamara on 25 March 1964 directed Step 2's nationwide implementation and assigned the consolidated function to a restructured Defense Supply Agency. The partial consolidation was gradually phased into being during calendar year 1965 (2:3,4).

The implementation of Project 60's Steps 1 and 2 required a compensating realignment within the Air Force Systems Command. After evaluating various plans and studies, AFSC undertook to replace the three Contract Management Regions with one Contract Management Division. Air Force headquarters duly constituted and activated Air Force Contract Management Division Headquarters on 4 January 1965 and assigned it to the Air Force Systems Command. Contract management field units remaining with the Air Force were reassigned from the three contract management regions to the new headquarters on 1 April 1965. These included, in addition to the 22 Air Force Plant Representative Offices, five Test Site Offices (TSOs) and five Contract Support Detachments located primarily at intercontinental

ballistic missile sites. Contract management at the TSOs and missile sites had not been included within the scope of Project 60, so these responsibilities remained intact with the Air Force (2:4).

Project 60, Step 3

Step 3 of Project 60 called for the consolidation under the DSA of all plants, and the phasing out of the Service Plant Cognizance Program (1:68). There has been considerable service opposition to Step 3 of Project 60, and to date, this last step has not been implemented.

Plant Cognizance Today

Plant Cognizance in the U. S. today belongs to DSA, with enclaves of plants throughout the country that are run by the services. DSA's Defense Contract Administration Services (DCAS) organization is responsible for geographic coverage of the U. S. DCAS does this through nine Regional Offices. Regional Offices are broken down into 34 District Offices. In-plant DCAS Offices (DCASOs) report to District Offices. Plants that are not big enough to have an in-plant DCASO are administered from the District Office, with itinerant inspectors performing delegated U. S. Government test and inspection functions (13). DCAS has been given the responsibility for evaluating all contractor Equal Employment Opportunity and Industrial Security Programs. These are the only functions that DCAS performs at a Plant under Service Cognizance.

Since the establishment of Phases I and II of Project 60, AFCMD has

transferred Plant Cognizance of seven plants to either DCAS or another service, and has picked up cognizance of six plants (four from DCAS, two from the Navy) (14). It is the criteria for Service Plant Cognizance that allows these transfers that I wish to discuss in the rest of my paper.

SECTION III

PRESENT CRITERIA FOR PLANT COGNIZANCE

Introduction

The present criteria for assignment of plants to one of the services is called out in Department of Defense Instruction (DODI) 4105.59, (20 Aug 1970) "Department of Defense Plant Cognizance Program." Additionally DODI 4105.64, "Technical Representation at Contractors' Facilities" is indicated as a possible criteria in Enclosure 1 to DODI 4105.59, "Plant Cognizance Questionnaire."

DODI 4105.59

DODI 4105.59 states that:

- The Assistant Secretary of Defense for Installation and Logistics (ASD(I&L)) is responsible for the effective operation of the DOD Plant Cognizance Program (8:2).
- Under the category of Major System Plant Assignments, ASD (I&L) may consider assignment of a plant to a Military Department based on the following criteria:
 - a. The Military Department desiring cognizance has contract(s) in the plant for a major system or major sub-system (8:5). (A major system is one of a limited number of end-items composed of sub-systems and/or other components which, for reasons of military urgency, criticality, or resource requirements, is determined by DOD as being vital to the national interest. A major system is generally characterized by technical innovation, high unit cost, large size, long lead time and great complexity. A major sub-system is a major first tier component of a major system. It has similar characteristics to a major system but of lesser degree.) (8:4)

- b. The system must be designated as being of high national priority. It must involve an unusually high degree of technical innovation and complexity requiring exceptionally close technical direction and control by the appropriate system/project manager. Performance of CAS functions by other than the Responsible Military Department would adversely affect the successful completion of the system and its timely delivery to its ultimate user (8:5). ("High national priority" and "unusually high degree of technical innovation and complexity" are not defined in the DODI.)
- c. Subject to the above, other factors which will be considered in cognizance determinations include:
 - (1) Undelivered dollar balance of defense contract(s) for the system on which the request is based, and undelivered dollar balance of DOD contracts in plant by Military Department (8:6). (Undelivered dollar balance can be considered as the contractor's backlog.)
 - (2) Portion of plant and personnel used by contractor for performance of contracts for the above items (8:6).
 - (3) Mix and duration of major DoD contracts by type and Military Department (8:6).
 - (4) Current stage of system development (8:6). (Conceptual, Validation, Full Scale Development, or Production of the system on which the request is based.)
 - (5) Effect of assignment on the plant cognizance policies contained herein (8:6); and on the following DOD CAS objectives (8:1,2).
 - Improved administration of contracts in the field.
 - Provision of more uniform and timely support by DoD CAS components to purchasing offices, system/project managers and other organizations.
 - Elimination of duplicate effort.
 - Decreased operating costs.

- Improvement in government/industry relationship through:
 1. Reduction in government surveillance of contractors' performance.
 2. Increased uniformity in performance of Contract Administration Services.
- Under the category of Special Plant Assignments, the ASD(I&L) may consider assignment of certain contractors' plants not involved in prime contracts for producing major systems to a Military Department subject to the following criteria:
 - a. The Military Department desiring cognizance has major contracts in the plant such as those for research, exploratory development, systems engineering, management and technical direction; and research and development operating contracts (8:6). ("Major contract" is not defined in the DODI.)
 - b. The service or supply under contract must be of high national priority, in itself, or related to a major system of high national priority. It must involve such a high degree of technical innovation and complexity that performance of CAS by other than the Responsible Military Department would adversely affect the successful and timely completion of the contract (8:6).
- Additionally, the ASD(I&L) may consider a special category of contracts such as those for construction and stevedoring, for assignment to Military Department for performance of field CAS (8:6).
- Requests for assignment of major system plants and special plants shall include information required by the Plant Cognizance Questionnaire (Enclosure 1 to DODI 4105.59). Four copies of each questionnaire shall be submitted to the ASD (I&L) (8:7).
- The Military Departments and DSA will be advised of ASD(I&L) cognizance determinations (8:7).

The Plant Cognizance Questionnaire has eleven parts to it.

These will be discussed in Section IV.

USAF and AFSC Implementing Regulations

Although DODI 4105.59 states that two copies of implementing regulations shall be forwarded to ASD(I&L) within 60 days, to date, there are no Air Force or AFSC regulations on the DOD Plant Cognizance Program.

Negotiation After Plant Transfer Decision

Once the ASD(I&L) has determined that a plant should be transferred from one agency to another, then negotiations are set up between agencies. Negotiations entail a date for transfer, and a grab for bodies and spaces. This will also be discussed in Section IV.

SECTION IV

EVALUATION AND CRITIQUE OF PRESENT CRITERIA

Introduction

The assignment of plant cognizance can be separated into three main areas or phases. The first phase is the interpretation of the criteria for service plant cognizance. The second phase is the preparation and submission of the Plant Cognizance Questionnaire. The last phase is the negotiation process that follows the ASD(I&L) decision to assign/transfer plant cognizance to a military department. These three phases will be discussed in this Section.

Interpretation of Plant Cognizance Criteria

The interpretation of plant cognizance criteria is currently centralized in the office of the ASD(I&L) through its interpretation of DODI 4105.59. As discussed in Section III, the current criteria is very broad, and thus subject to wide ranging interpretation. The unilateral establishment of criteria for assigning plants to the services and determination of specific plant assignments by ASD(I&L) has led to the scenario in Figure 4.1 for AFCMD since 1968.

It is interesting to note that DODI 4105.59 was rewritten in August 1970, and although the new instruction further complicated plant cognizance assignment procedures and subtly raised the requirements a Service must meet to qualify for a plant assignment by rendering assignment criteria even more subject to extensive interpretation than before (11), five

REQUESTS FOR PLANT COGNIZANCE

<u>DATE</u>	<u>PLANT</u>	<u>ACTION</u>
AUG 68 (2:164)	CESSNA AIRCRAFT COMPANY MILITARY DIVISION	TURNED DOWN BY ASD(I&L)
NOV 68 (2:161)	GE-EVERETT, MA	TURNED DOWN BY ASD(I&L)
NOV 68 (2:162)	GE-WEST LYNN, MA	TURNED DOWN BY ASD(I&L)
NOV 69 (3:40)	BELL AEROSYSTEMS CO. BUFFALO, NY	TURNED DOWN BY HQ USAF
JAN 71 (4:55)	MCDONNELL DOUGLAS ST LOUIS, MO	APPROVED
AUG 72 (5:84)	PRATT & WHITNEY EAST HARTFORD, CT	TURNED DOWN BY HQ USAF
MAY 73 (5:88)	FAIRCHILD-REPUBLIC FARMINGDALE, NY	APPROVED
DEC 75	TRW REDONDO BEACH, CA	APPROVED
DEC 75	WESTINGHOUSE BALTIMORE, MD	APPROVED
DEC 75	GE-WEST LYNN, MA	APPROVED

approved plant transfers occurred subsequent to the revised DODI. Since three of the five (TRW, WESTINGHOUSE, and GE- WEST LYNN) were just approved this past December, and one of the three, GE-WEST LYNN, had been turned down twice earlier, it is hard to make any interpretation from the data. A possible explanation for GE-WEST LYNN could be that there were different incumbents in decision making positions.

Plant Cognizance Questionnaire

Preparation of the Plant Cognizance Questionnaire (Enclosure I to DODI 4105.59) is the second step to plant cognizance. Four copies of each questionnaire have to be submitted to ASD(I&L) whenever a service requests assignment of a major systems plant or special plant. Of the eleven questions on the questionnaire, only two, the first and eleventh are straightforward and do not require any interpretation. These are:

- "1. Provide name of contractor and name and location of the plant for which cognizance is desired. When more than one building is involved, provide maps showing location of all buildings.
11. Describe briefly the CAS component to be established, including Title, location and command relationship" (8:Encl 1).

Question two:

- "2. Describe in detail what is being procured which is the basis for the plant assignment request. (If not a major system indicate its relationship to the major system)" (8:Encl 1).

This question requires a detailed description of what is being procured which is the basis for the plant assignment request. It also requires an explanation as to whether the program is a major system program or a part of a major system program. Since the definition of a major system in the DODI is so vague i.e., characterized by technical innovation, high unit cost,

large size, long lead time, and great complexity, the interpretation of a major program by the CAS organization often differs quite a bit from ASD(I&L) as well as its own service headquarters interpretations. This is verified by the seven requests for plant cognizance that were turned down either by HQ USAF or ASD(I&L) since 1968 (Figure 4.1). In order to answer question two the CAS component usually lists all programs with a projected contract value in excess of \$100 million. On the approved Westinghouse plant cognizance questionnaire, eight different programs were considered major programs by AFCMD. These eight not only included AWACS radar and F-16 radar, but also some relatively small programs such as, Pave Spike, (a new laser-guided ordnance target designator) Land Surveillance Radar, Electronically Agile Radar (6:2,3,4).

Question three:

- "3. Indicate the current status of the system or subsystem in relation to its life cycle. (e.g. Research, Exploratory Development, Advanced Development, Concept Formulation, Contract Definition, Engineering Development, Operational System Development, Production). Indicate when production stage began or the approximate date when production is expected to begin" (8:Encl 1).

This question needs to be updated to make it more in line with the phases in the life cycle in DODD 5000.1. Additionally, the rationale for this question is not explained. The DODI does not establish any phase(s) of the acquisition cycle where service plant cognizance would be preferred.

Question four:

- "4. Specify any previous technical developments on which the system is based, explaining what is new and different" (8:Encl 1).

Question four is irrelevant to service plant cognizance. In many cases, the previous technical developments on which the system is based were developed at other contractor facilities or service laboratories. Since the intent of the question should be to help ASD(I&L) staff get as much information as possible on the specific program and not previous programs, the question is immaterial to a decision on plant cognizance. In the approved Westinghouse questionnaire, previous technical developments on all eight programs were discussed. However, the worth of the following to a decision of service plant cognizance is questionable:

"AWACS. The AWACS radar is a state-of-the-art radar based upon the results of the multi-year Overland Radar Technology (ORT) Program and a 3-year Brassboard radar ground/flight test program. It is the most technically difficult airborne radar ever attempted.

The new, difficult technical developments on which the radar is based include:

(1) A Stable Local Oscillator (STALO) which must be considerably more stable than any STALO built, to reject ground clutter. Other parts of the radar (transmitter, microwave receiver, and signal processor) must maintain this stability.

(2) A transmitter operating at 90KV and yet packaged to meet severe constraints in regard to volume, weight, and power.

(3) A phased-array antenna which must meet extremely tight tolerances to achieve small enough sidelobes to reject ground clutter.

(4) Automatic fault detection and isolation to a degree technically very difficult to achieve.

The Electronics Counter-Counter-Measures improvements will require very difficult engineering efforts to maintain stability while expanding the number of operating frequencies.

Pave Spike. The Pave Spike program is a follow-on to the Pave Knife program, with laser coding and improved tracking capabilities added.

TPS-43E (Land Surveillance Radar). The TPS-43E is a follow-on to the Westinghouse TPS-43 program. Extra features of the TPS-43E include a UPA-62 Scope Plan Position Indicator; longer shelter; increased height and range capability; and co-located radios." (6:7)

Questions five and seven:

- "5. For systems in process, and where CAS is under another Service/Agency, provide specific evidence on how this situation adversely affects the successful completion of the System. For new systems, explain why you believe performance of CAS by other than the system/project manager's service would affect the successful completion of the System.
7. Indicate why the installation of a technical representative at the plant to perform system/project manager functions would not provide essential technical direction and control." (8:Encl 1)

These two questions are related. Question five asks why can't a DCAS or other service CAS organizations do the job, and question seven states, given question five, why wouldn't a program office technical supplement to the current CAS organization do the job. These questions have to be handled very carefully, since "one CAS organization should not criticize other CAS organizations". To get around these questions, AFCMD highlights those innovations that were implemented at AFCMD which make it different from DCAS on other service CAS organizations. The assigning of a significant number of engineers to each major program; the use of Industrial Engineers to assess contractors manufacturing planning and control systems; the use of overhead specialists to manage contractor overhead which accounts for about 40% of program costs; the establishment of a subcontract management division to continually evaluate the effectiveness of the contractors management of his subcontractors; and the use of "projectization,"

the establishment of an organization within the AFPRO, specifically dedicated to major programs in the plant; are a few of the innovations discussed in the Westinghouse questionnaire. Additionally, since AFCMD and the buying divisions are in AFSC, the "reporting to the same boss" is highlighted (6:9-13).

Question six:

- "6. In the event cognizance is assigned, indicate those system/project manager responsibilities which will be delegated to the CAS component which are over and above the normal CAS functions listed in ASPR 1-406. For each such responsibility delegated indicate the extent of the CAS component's authority, including any specific authorities to finally commit the government to a course of action significantly affecting the contract or the system." (8:Encl 1)

This question rests heavily on the confidence that the program office has in the agency performing the CAS functions. The Westinghouse package required the drafting up of a preliminary Memorandum of Understanding between the AWACS Radar program office and AFCMD before the question could be answered.

Question eight:

- "8. Provide following information on the magnitude of contracts for the system or other basis for request:
- a. Undelivered dollar value of DOD contracts for the major system, or other item/service which is the basis for requested assignment. If more than one item is involved, furnish information separately.
 - b. Undelivered dollar balance on all contracts (by Service, NASA other)." (8:Encl 1)

Question eight has two problems with it. First, the present CAS organization will not give information to a different service CAS organization on the undelivered dollar balance (UDB) of programs in the plant. The only time

7
this information is requested is when a plant cognizance questionnaire is prepared, and in most cases, the present CAS organization is reluctant to relinquish plant cognizance. Second, although they can get the information, most CAS organizations do not have UDB figures for their contractors. For the Westinghouse package, unliquidated obligations (ULO) were used instead of UDB (6:19). ULO is not a measure of contractor backlog, and can be quite a bit less than UDB. Although there is no guidance, the use of ULO when UDB figures are not available, must be satisfactory because the Westinghouse plant transfer was approved.

Question nine:

- "9. Indicate the projected time span, during which the contractor will be involved in performing on the system/service for which cognizance is requested. (Include work not presently under contract but planned)." (8:Encl 1)

This question has to be addressed for all programs previously called out in question two. To get this information, the applicable program offices must be contacted for their projected full scale development and production schedules. A problem occurs when the contractor is in prototype competition. If source selection has not been made, the program office is reluctant (and rightfully so) to associate any data with one of the prospective contractors.

Question ten:

- "10. a. Furnish following information on all CAS personnel presently in plant on full-time basis:

<u>Functional Area</u>	<u>Number Full Time</u>	<u>Military Department/ DCAS</u>	<u>Field Activity of Personnel</u>
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- b. Assuming cognizance would be assigned as requested, indicate the changes which would occur in 10a above, with reasons therefor." (8:Encl 1)

The first part of question ten would be easy to answer if the present CAS component was willing to supply the information. If not, the task becomes harder and sneakier (i.e., ask the program office to get a copy of a current organization chart and manpower figures for the CAS component and send it to you). The second part can be estimated using a manpower model AFCMD has developed. The number, dollar values, and types of major programs in plant; number of separate plant locations; the total number of government agencies with work in-plant, and the total dollar value of work in the plant data is needed for the manpower model (12).

What I have tried to show in this part of the Section is that the questionnaire is vague, subject to interpretation, in some cases irrelevant, and always very lengthy to answer (37 pages, single spaced, for Westinghouse).

Negotiation After Plant Transfer Decision

The last phase in the assignment of plant cognizance to a military department is the negotiation that takes place following the ASD(I&L) decision. What is negotiated is a memorandum of agreement for the transfer of the plant. Items considered are date of transfer, and number of personnel spaces to be transferred with the plant.

It is this latter area (personnel) that has caused problems, because the losing service has in many cases drained the plant office of manpower authorizations between the time it learned of the decision to transfer the plant and the time the plant was actually transferred. DOD policy regarding transfer of manpower spaces was established in 1966 to be the number of personnel spaces authorized by the losing Military Department/DSA for full-time performance of CAS in the plant, as of three months prior to the date of assignment or transfer thereof (9). This policy led to a disagreement between the Air Force and the Navy on transfer of McDonnell Douglas, St. Louis. Negotiations started on 17 March 1970, and the plant was finally transferred on 24 January 1971. The Air Force position was that the date to be used as a baseline for calculating transfer of manpower spaces should be 12 March 1970, the date of the OSD letter directing the transfer of the plant to the Air Force (date of assignment). The Navy wanted to use a 1 January 1971 date as a baseline (their calculation for date of transfer) (4:44). All previous plant transfers had used the date of assignment (4:43). The Air Force position was that 234 spaces should be transferred, while the Navy stated that 203 spaces should be transferred. In December 1970, the Deputy Assistant Secretary for Procurement settled the argument and 219 spaces were transferred (4:50).

Currently there are no groundrules regarding transfer of manpower spaces. The spaces transferred depend on what is negotiated between the two agencies (14).

With the negotiation of the memorandum of agreement for the transfer of the plant, the last phase of assignment/reassignment of a contractor's plant to a Military Department is complete.

Summary

In this section I highlighted problems in the interpretation of the criteria for service plant cognizance, the preparation of the Plant Cognizance Questionnaire, and in the negotiation process that follows the ASD(I&L) decision to assign/transfer plant cognizance to a military department. In Section V I will recommend changes that will correct these problems.

SECTION V

RECOMMENDED CHANGES TO PRESENT CRITERIA

Introduction

In Section IV I separated the assignment of plant cognizance into three main areas. In this Section I will propose two changes to the present criteria that I feel will alleviate the problems discussed in Section IV.

"Automatic" Assignment of Plant Cognizance

The SecDef through DODD 5000.1, Acquisition of Major Defense Systems, has defined that the following programs should be called major programs:

"This designation (of a major program) shall consider (a) dollar value (programs which have an estimated RDT&E cost in excess of 50 million dollars, or an estimated production cost in excess of 200 million dollars, all in FY 72 dollars); (b) national urgency; and (c) recommendations by DOD Component Heads or Office of Secretary of Defense (OSD) officials." (7:1)

These programs become part of the Defense Systems Acquisition Review Council (DSARC) process described in DODD 5000.2, and DODD 5000.26. Part c of the definition allows the DOD component heads (Service Secretaries) to also include programs not meeting the dollar goal or national urgency criteria under the major program category. These additional programs are so critical to the service that the visibility of the SecDef is

required for them. Thus DODD 5000.1 allows the services to highlight their most important programs to the SecDef through the DSARC. Since these programs are the most important to the service, I feel that these programs and only these programs should receive the benefit of the same service CAS organization in the contractors plant.

DODD 5000.1 also states that, "The development and production of a major defense system shall be managed by a single individual (program manager) who shall have a charter which provides sufficient authority to accomplish recognized program objectives." (7:1) I feel this charter should provide to the program manager's team, his service's contract administration agency. AFCMD set a precedent in this area on the A-10 program, when an AFCMD cadre was set up to work at the program office during the latter part of the A-10 Validation phase. This cadre which assisted in the source selection process subsequently became the core of the AFPRO organization at the successful contractors plant. The team and the concept aided the program manager immeasurably on his program.

Thus, I'm proposing an "automatic" process for assigning plant cognizance to a service organization by tying plant cognizance to the DSARC process. This will eliminate arbitrary, nonuniform, and time consuming, plant cognizance assignments. The process should contain the following steps/criteria:

1. The program manager should include in the Validation Phase update of his program management plan (PMP) a provision for the assignment to the Air Force of the plant that is awarded the prime FSD contract for that system. A similar provision should be included in the program office input to the Draft Decision Coordinating Paper (DCP), if the plant is not already assigned to the Air Force. The

intermediate headquarters should assure that such a provision is included in the DCP sent to the DSARC. This was proposed in a letter from AFSC/PP to the buying division on 10 Nov 1972 (10). However, as far as I could find out, these points were never formalized into an AFSC directive.

2. At DSARC II, the program manager should brief the status of plant cognizance including any problems that may arise.
3. The criteria for plant cognizance should be as follows:
 - a. If DCAS has plant cognizance, then the plant will automatically be transferred to the Air Force upon source selection.
 - b. If another service has plant cognizance, then a determination will have to be made by the SecDef as to which service should be in the plant. Items to be considered are:
 - (1) What is the UDB (backlog) of each service programs?
 - (2) Is one service work decreasing while the others is increasing?
 - (3) What phase in the acquisition cycle is the current service in? (The FSD phase is more critical for plant cognizance).
4. If applicable, the plant will be transferred to the Air Force upon selection of the FSD contractor.
5. The DSARC process does not stop here for AFCMD. Other plants (subcontractors, and GFE plants) must also be addressed. Plant cognizance for these organizations should be based on the following criteria:
 - a. Dollar value (programs which have an estimated RDT&E cost in excess of 50 million dollars, or an estimated production cost in excess of 200 million dollars) and
 - b. UDB (UDB on Air Force programs in plant totalling more than 50% of total Government UDB in plant).

6. Plants should be transferred to DCAS when the DSARC program has transitioned from AFSC to AFLC.
7. Plants should be transferred to another military component when criteria in 3b. above dictates.

Uniform Transfer of Personnel

The second change that is necessary is in the process for transfer of personnel and spaces that follows the ASD(I&L) decision on plant transfer. The manpower model that was developed by AFCMD has been recommended to the Joint Logistics Commanders for use during the transfer of plants. The Army was tasked to develop procedures (including proposal of a model similar to AFCMD's) for manpower transfer during plant transfer (14). An agreed to manpower model to be used for transferring manpower spaces by the services and DSA is a must.

Conclusion

What I have tried to present in this paper is that the DOD Plant Cognizance Program at the present time is arbitrary, vague, and non-uniform, and that the change in plant cognizance is unnecessarily a lengthy process. The proposed changes are clear, uniform, not arbitrary, and eliminate the unnecessary length of time and manpower required for transfer of plant cognizance. Figure 5.1 shows the current status of plants assigned to AFCMD, and which plants would be added and deleted if the plant cognizance criteria presented in this Section was followed.

<u>CONTRACTOR</u>	<u>CURRENT ASSIGNMENT</u>	<u>TRANSFER PLANT</u>	<u>KEEP PLANT</u>
AEROJET SACRAMENTO, CA	USAF	X	
BOEING SEATTLE, WA	USAF		X
CHEMICAL SYSTEMS DIVISION SUNNYVALE, CA	USAF	X	
FAIRCHILD FARMINGDALE, NY	USAF		X
GENERAL DYNAMICS FT WORTH, TX	USAF		X
GENERAL ELECTRIC CINCINNATI, OH	USAF		X
GENERAL ELECTRIC PHILADELPHIA, PA	USAF	X	
GENERAL ELECTRIC WEST LYNN, MA	USAF		X
GMC INDIANAPOLIS, IN	USAF	X	
HUGHES CULVER CITY, CA	USAF		X
LOCKHEED MARIETTA, GA	USAF		X
LOCKHEED SUNNYVALE, CA	USAF		X
MARTIN MARIETTA DENVER, CO	USAF	X	
MCDONNELL DOUGLAS ST LOUIS, MO	USAF		X

Figure 5.1

<u>CONTRACTOR</u>	<u>CURRENT ASSIGNMENT</u>	<u>TRANSFER PLANT</u>	<u>KEEP PLANT</u>
NORTHROP HAWTHORNE, CA	USAF		X
ROCKWELL INTERNATIONAL B-1 LOS ANGELES, CA	USAF		X
ROCKWELL INTERNATIONAL ELECTRONICS ANAHEIM, CA	USAF	X	
ROCKWELL INTERNATIONAL ROCKETDYNE CANOGA PARK, CA	USAF	X	
THIOKOL BRIGHAM CITY, UT	USAF	X	
TRW REDONDO BEACH, CA	USAF		X
WESTINGHOUSE BALTIMORE, MD	USAF		X
UNITED TECHNOLOGIES CORP (P&W AIRCRAFT) EAST HARTFORD, CT	NAVY	TRANSFER PLANT TO USAF	

Figure 5.1 (Cont'd)

APPENDIX A

CHRONOLOGY OF MAJOR CONTRACT MANAGEMENT EVENTS

- July 1917 -- Aircraft inspection department formed in the Equipment Division of the Signal Corps to augment the production effort. This was the first organizational element solely concerned with a military aircraft contract management function.
- 27 July 1917 -- The Secretary of the Navy authorized a Naval aircraft factory in Philadelphia.
- June 1921 -- First peacetime in-plant inspection office formed, at the Boeing Airplane Company facility in Seattle, Washington.
- 1923 -- Second peacetime in-plant inspection office formed, at the Douglas Aircraft Company plant in Santa Monica, California.
- 1926 -- Congress passed amendments to the National Defense Act that required the Army Air Corps to obtain all military aircraft from private aircraft manufacturers.
- 15 October 1926 -- Army Air Corps established a Materiel Division headquarters at Dayton, Ohio.
- 1926 -- Procurement Inspection Districts established under the Materiel Division.
- 28 December 1939 -- Procurement Inspection Districts consolidated with Procurement Planning Districts.
- Early 1941 -- Full-time Production specialists placed in district offices and plants.
- Late 1941 -- Contracting Officers (at Dayton) divided into Procurement Contracting Officers, situated at Dayton, and Administrative Contracting Officers, situated at district and plant offices.
- 11 December 1941 -- Newly formed Air Service Command (supply and maintenance functions) removed from jurisdiction of Materiel Division.
- 1942 -- AAF Accountable Officers (industrial property) appointed and assigned to contract administration field activities.
- 1 March 1942 -- Fourth Procurement District (Midwestern) established at Wichita, Kansas. At the same time, the headquarters of the Central Procurement District moved from Wright Field to Detroit. Other

districts included the Eastern at New York and the Western at Los Angeles. AAF plant representative offices and Area offices reported to District offices.

16 March 1942-- Materiel Division redesignated Materiel Command.

15 June 1943 -- Establishment of a fifth Procurement District (Midcentral) at Chicago.

1 July 1943 -- Establishment of a sixth Procurement District (Southeastern) at Atlanta.

Spring 1944 -- Initial assignment of Terminating Contracting Officers and Plant Clearance specialists to districts and plants.

31 August 1944 -- Materiel Command and Air Service Command combined and redesignated Air Technical Service Command. Contract management in ATSC continued to be supervised by six Procurement Districts. Plant representative offices and other contract management field offices reported to the Districts. The Districts reported directly to AFSC Headquarters.

1 March 1945 -- Southeastern District at Atlanta discontinued.

13 June 1945 -- Midcentral District at Atlanta discontinued. Concurrently, the Central District headquarters was moved from Detroit to Chicago.

1 August 1945 -- Midwestern District at Wichita discontinued.

9 March 1946 -- Air Technical Service Command redesignated Air Materiel Command.

1 April 1946 -- As a result of a drastic reduction in procurement following the end of WWII, the procurement district headquarters were dropped, eliminating one intermediate level of command. Eleven Air Procurement Field Offices that formerly reported to District headquarters now reported directly to the AMC Headquarters Directorate of Procurement. Seven remaining Air Force Plant Representative Offices also reported directly to AMC Headquarters. By the end of the following year the number of Procurement Field Offices had dropped from eleven to seven and the number of plant offices from seven to four.

19 May 1948 -- Effective date of Armed Services Procurement Act of 1947. Uniform policies and procedures were gradually established in Armed Services Procurement Regulation (ASPR).

10 October 1949 -- Inspection Division of the Directorate of Procurement and Industrial Planning in Headquarters AMC was redesignated the Quality Control Division.

23 January 1950 -- Establishment of Air Research and Development Command (became operational on 2 April 1951).

1 March 1951 -- As a result of the step-up in procurement following the outbreak of the Korean war, AMC revived the traditional contract management field structure. Six Air Procurement Districts were again established; AFPROs and Procurement Field Offices, the latter renamed Air Regional Offices, reported to District headquarters. By the end of the following year the number of Air Regional Offices had increased to 25 and the number of AFPROs to 36.

1 March 1951 -- Contractors were made accountable for all government property in their possession, with Air Force field personnel becoming Industrial Property Administrators.

1 October 1953 -- The six Air Procurement District Headquarters were deactivated, with their functions being assumed by beefed-up AMC Air Materiel Area Headquarters. AFPROs and Air Regional Offices, the latter redesignated Air Procurement Districts, were assigned to Air Materiel Area headquarters according to system contracts handled (in the case of AFPROs) or geographical area covered (in the case of APDs). Under the new system, each AMA Directorate of Procurement and Production not only let contracts but also supervised their field management.

15 September 1958 -- Headquarters AMC decentralized the weapon system procurement and production functions and combined Weapon System Project Offices under the new Aeronautical Systems Center, Ballistic Missiles Center, and Electronic Systems Center.

1 July 1960 -- As a result of strong USAF IG and GAO criticism, contract management intermediate field headquarters structure reinstituted. Three contract management region headquarters, reporting to Headquarters AMC, were established to supervise AFPROs, APDs, and Test Site Offices. The three contract management regions were: Eastern CMR (Olmstead AFB, PA); Central CMR (Wright-Patterson AFB, OH); Western CMR (Mira Loma AFS, CA).

11 July 1960 -- Western Region made responsible for Air Force contract management at Atlas, Titan, and Minuteman sites throughout the nation.

1 April 1961 -- Contract management region headquarters, AFPROs, APDs, and TSOs assigned to the new Air Force Logistics Command.

1 July 1961 -- Contract management region headquarters, AFPROs, APDs, and TSOs reassigned from AFLC to the Air Force Systems Command.

- 12 September 1961 -- AFSC formally approved WCMR-initiated proposal to establish a development engineering capability at AFPROs and APDs as an extension of SPO engineering activities.
- 1 December 1961 -- WCMR Development Engineering program formally established.
- 1 January 1962 -- Air Procurement Districts redesignated Air Force Contract Management Districts and Air Procurement Offices were redesignated Air Force Contract Management Offices.
- May 1962 -- Secretary of Defense Robert S. McNamara established DOD Project 60, and extensive examination of DOD contract management that developed into a DOD-wide reorganization of the function.
- 28 August 1963 -- Project 60 Policy Guidance Committee report submitted to the Secretary of Defense.
- 11 October 1963 -- Secretary of Defense directed the establishment of step 1 of Project 60--the "revitalized" Plant Cognizance Program.
- 11 October 1963 -- Secretary of Defense directed the establishment of a Director of Contract Administration Services under the Assistant Secretary of Defense for Installations and Logistics.
- 25 March 1964 -- Secretary of Defense directed the implementation of Step 2 of Project 60--the consolidation under a single DOD agency of all geographically-oriented DOD contract management.
- 4 June 1964 -- Secretary of Defense assigned consolidated geographically-oriented contract management to the restructured Defense Supply Agency.
- 31 July-3 August 1964 -- HQ WCMR moved from Mira Loma AFS to the Arbor Vitae complex in Los Angeles.
- 4 January 1965 -- Activation of Air Force Contract Management Division Headquarters at Los Angeles (HQ WCMR renamed HQ AFCMD).
- 1 April 1965 -- All Air Force-assigned plant representative offices, test site offices, and contract support detachments assigned to AFCMD.
- 15 November 1965 -- Central Contract Management Region Headquarters Deactivated.
- 15 December 1965 -- Eastern Contract Management Region Headquarters Deactivated.

APPENDIX B

GLOSSARY OF ABBREVIATIONS

A -

AFCMD - Air Force Contract Management Division
AFPRO - Air Force Plant Representative Office
AFSC - Air Force Systems Command
ASD(I&L) - Assistant Secretary of Defense (Installation & Logistics)
ASPR - Armed Services Procurement Regulation
AWACS - Airborne Warning and Control Systems

C -

CAS - Contract Administrative Services

D -

DCAS - Defense Contract Administration Services
DCASO - Defense Contract Administration Services Office
DCP - Decision Coordinating Paper
DOD - Department of Defense
DODD - Department of Defense Directive
DODI - Department of Defense Instruction
DSA - Defense Supply Agency
DSARC - Defense System Acquisition Review Council

F -

FSD - Full Scale Development

H -

HQ USAF - Headquarters, United States Air Force

N -

NASA - National Aeronautics and Space Administration

O -

ORT - Overland Radar Technology
OSD - Office of Secretary of Defense

P -

PMP - Program Management Plan

S -

SECDEF - Secretary of Defense
STALO - Stable Local Oscillator

T -

TSO - Test Site Office

U -

UDB - Undelivered Dollar Balance
ULO - Unliquidated Obligations

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